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R&D Pork Barrel Heading For A Big Year in Congress

The details are still being excavated from the deliberately dense text of Congressional appropriations language. But the academic-pork brigade has apparently racked up a pretty good year on Capitol Hill, despite Congressman George Brown's early claims of success in countering his colleagues' beneficence toward their hometown colleges, universities, and high-tech firms. The totals are down, but still quite high.

In a preliminary estimate of the take from the Department of Defense—traditionally the largest single source of earmarks—Brown reported a total of $196.5 million, about 20 percent below last year's record-setting figure. And he named the University of Pittsburgh "the big winner in the DOD earmarks," which provided Pitt with a total of $70 million for the National Defense Center for Environmental Excellence and the National Center for Excellence in Metalworking Technology, to be financed, respectively, by the Army and the Navy, though neither requested funds for these ventures.

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NASA's Ever-Sinking Budget—P. 6

Brown, Chairman of the House Science, Space, and Technology Committee, has for years been off on a lonely campaign against pork-barrel appropriations, bewailing them as dead-of-night diversions at the expense of peer-reviewed research projects and programs. The Congressional practitioners of this craft regard it as part of the desirable process of delivering for the folks back home, and consider Brown a bit of crackpot for making a fuss. The academic recipients of pork-barrel money say they're merely accepting relief from the flaws of peer review—though some of them, like Columbia University, Tufts, and Boston University, do well under that system, too.

At a press briefing on October 27, Brown confidently asserted, "I'm satisfied that we had a reasonably good year in terms of reducing earmarks"—which last year, in academe alone, were estimated at $763 million, triple the count of 1988. Brown's assessment was based on a decline in earmarked funding in money bills covering the Departments of Agriculture, Energy, Commerce, Housing, and Veterans Affairs, plus NASA.

In fiscal 1993, by Brown's reckoning, these agencies were tagged for a total of $411 million in earmarks. But for FY 1994 (which began October 1), their earmarks had fallen to $199 million, a decline that Brown attributed to his campaign

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Science, Technology Council Established by Clinton

The Clinton Administration has given science and technology a major upgrade on the political table of organization, establishing a government-wide National Science and Technology Council (NSTC) "to coordinate science, space, and technology policies throughout the Federal Government."

Serving as Chairman, at least nominally, will be Bill Clinton himself, thus putting science and technology on an unprecedented organizational par with the National Security Council, the Domestic Policy Council, and the National Economic Council, all chaired by the President.

At the crucial staff level, however, the central organization remains the White House Office of Science and Technology Policy (OSTP), whose Director, John Gibbons, will

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In Brief

In one of their more scandalous acts of pettiness, the in-crowd at the National Academy of Sciences have regularly blocked election of Carl Sagan, the astronomer and pioneer of TV science. Suspicions are the mandarins are so offended by Sagan's celebrity that they've been willing to ignore his scientific accomplishments. Now Sagan has been designated the recipient of the Academy's top honor (short of election), the Public Welfare Medal.

In announcing the award, NAS President Bruce Alberts stated, "In the public view, Carl Sagan's name may be associated more with science than that of any other living scientist." Alberts, in office since July, exhibits a monomania about the failings of science education, and prescribes the involvement of scientists in teaching as an essential part of the remedy. Sagan, Director of the Cornell Laboratory for Planetary Studies, is the author of 600 scientific papers and popular articles, 20 books, and holds medals from NASA for Exceptional Scientific Achievement and Distinguished Public Service.

Rep. John Dingell and Jerome Kassirer, Editor of the *New England Journal of Medicine*, are hissing at each other again, with Kassirer refusing to publish Dingell's reply to an article and letters about him in the Sept. 2, 1993, NEJM by ex-NIH Director Bernadine Healy, David Baltimore, and others, accusing Dingell of exaggerating and misrepresenting issues of scientific misconduct in the Shattuck Lecture Dingell delivered in May 1992. In his unpublished reply, Dingell says Healy's remarks show "why her tenure at NIH, which began with such fanfare and such promise, proved to be a fiasco...." Kassirer declined publication, stating that NEJM "is not intended as a forum for an ongoing dispute between individuals...."

. . . Defense Money Bill Rushed Through the House

(Continued from Page 1)

to depict pork-barrel spending in academe as unclean and wasteful.

On November 10, however, the California Democrat was bitterly acknowledging that his legislative rivals had outfoxed him and voted into law hundreds of millions of dollars in earmarked defense funds. As Brown lamented in a statement for the *Congressional Record* of that date, a Defense Appropriations Conference Report containing the earmarks stealthily slipped through the House before he and his compatriots, few though they are, could mobilize resistance. Rarely has a veteran legislator owned up to such grand failure in the intricacies of parliamentary strife.

"That bill, containing more than $254 billion in spending," Brown declared, "went through the House in approximately a quarter of an hour. If you had blinked, you would have missed it. Members on the fifth floor of Cannon [a House office building, two blocks from the Capitol] would not have had time to catch an elevator, walk across the street, and participate in the voice vote on final passage. In fact," Brown went on, "if they didn't have C-SPAN on, they might not have known a vote was occurring."

Even if they had known, Brown explained, there was little they could have done about the bill, since it came to the floor under a quietly obtained procedural rule that essentially precluded debate.

Continuing his gloomy post-mortem account, Brown noted that his staff was notified at 4:52 pm on November 9 that the Rules Committee would meet at 5 pm to vote on the conditions for considering the Defense Conference Report on the House floor.

"We did send a staffer to look at the more than 220 amendments and 312 pages of the statement of managers," he said. "While the staffer reviewed the text, the Rules Committee was busy providing a rule that waived all points of order against the bill"—thus effectively blocking objections.

On the following morning, Brown continued, "the House came into session a half hour earlier than originally scheduled. Instead of the usual round of one-minutes [of statements] by our colleagues, the House moved directly to consideration of the rule for the Defense Appropriations Bill. That rule was accepted on a voice vote. We then moved directly to consideration of the bill. That bill was then accepted on a voice vote.

"The entire package moved through the House in approximately 15 minutes," he said, adding: "The important point to note is that the bill moved before the amendments and statements of the managers were made widely available to Members or staff. The *Congressional Record* containing the Conference Report was not available until almost noon—two hours after we passed the legislation."

To forestall a later move by Brown, the Appropriations Bill, under a heading "Items of Special Congressional Interest," murkily announces: "Funds for projects noted to be of special interest in either the House or the Senate reports remain so, even if the dollar value of these items has changed in conference or even if not specifically mentioned in this report, unless indicated to the contrary in this report."

Brown noted in his November 10 statement that "a complete analysis of the Defense Appropriations Bill will take weeks of work," but a "quick check," he said, "indicates that there are probably several billion in earmarks folded into the bill and accompanying reports. Most of these earmarks are associated with efforts to direct research dollars to favored contractors, bases, or universities."

His reckoning of a mere $196.7 million in earmarks from the Defense Department refers only to the academic variety, and is sure to be revised as details are unearthed from the legislative texts.

The difficulty of identifying earmarks arises not only from the deliberate inscrutability of Congressional appropriations texts, but also from differences over what qualifies as peer review. Recipients of funds regarded by Brown as pure pork often respond that their projects have passed strict examination by qualified reviewers of one sort or another, though not necessarily reviewers commissioned by the agencies that are statutorily strongarmed into providing the funds. To pay up in these circumstances, the agencies complain, they must take money from projects that have survived what they consider proper peer review.

In any case, the peer-review issue is simple in comparison to the task of translating Congressional prose into comprehensible language. A typical example of the special compositional art that has evolved on Capitol Hill is provided by the following section of the Defense Appropriations Conference Report, which whizzed through the House in 15 minutes on November 9:

"Provided further, That not less than $1,000,000 of the funds appropriated in this paragraph shall be made available only to a joint research partnership involving an educational institution, not now engaged in a large volume of basic research, and a biomedical research institute, including a working arrangement with Canadian and German scientists,

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Shunning Earmarks, Vanderbilt Got Tax Favors

There are earmarks and there are earmarks. And not all of them are equally opprobrious to those who denounce pork-barrel appropriations as injurious to academic integrity and a threat to the financial underpinnings of science.

Prominent among opponents of pork-barrel money for academic research is Joe B. Wyatt, Chancellor of Vanderbilt University since 1982. Testifying in June at a hearing chaired by Rep. George Brown, Wyatt said that his university doesn't lobby for research money, and declared, "I want to tell you that the United States is yielding control of its research budget to special interests, and that we have a crisis."

He repeated that argument on October 12 in a *New York Times* Op-ed article, which warned that "Some of America's most prestigious universities and their lobbyists are playing dangerous games with Federal scientific research funds."

Since money for research, as well for virtually everything else financed by the federal government, comes out of the same pot, it is to be noted that Vanderbilt, along with several other major universities, successfully prowled Congressional corridors in 1985-86 for what turned out to be highly profitable, hand-tailored tax advantages.

The Tax Reform Act of 1986 set a $150-million maximum on tax-exempt bonds that could be issued by most non-profit institutions. The Congressional intent was to reduce tax avoidance by higher-income persons and cut losses in federal tax revenues.

Vanderbilt University responded to this provision by lobbying Congress for "special interest" relief, which excluded $100 million in Vanderbilt bonds from the $150 million cap. At attractive tax-exempt rates, Vanderbilt subsequently issued scores of millions of dollars of bonds, in addition to those it had already sold. Through 1993, the loss to the Treasury from Vanderbilt's $100-million exemption has been estimated at approximately $20 million in foregone revenues.

Vanderbilt is not referred to by name in the legislative text. In cryptic earmark fashion, the legislation states that the tax-exemption is for bonds "issued on behalf of a university established on August 6, 1872, for a project approved by the trustees thereof on November 11, 1985." If any university other than Vanderbilt fits those specifications, it has yet to come forward and claim its rewards.

The 1986 tax legislation also conferred tax exemptions on bonds issued by Georgetown, identified only as "a university founded in 1789 ... whose request to issue bonds for items to be determined by the issuer was transmitted to Congress on November 7, 1985." Similarly arcane identifications also produced benefits for NYU and Stanford.

Pork-Barrel Appropriations

(Continued from Page 2)

for the development and testing of a new insulin derivative...."

That is relatively lucid compared with what comes after: "Provided further, that of the funds appropriated under this heading, not less than $43,000,000 shall be made available only for the Computer-aided Acquisition and Logistics Support (CALS) Shared Resource Center (CSRC) program, which shall be managed only by the Advanced Research Projects Agency (ARPA) and of that amount, not less than $23,000,000 shall be made available only for the continued operation of the original CSRC by the current nonprofit institution or its successor in interest, as the Department's tri-service CALS standards and technologies development, deployment, training, and education hub for the CSRC program...."

As late as last week, Brown's staffers were still puzzling over the identities of the organizations that fit those carefully delineated specifications.

In opposition to pork-barrel raids on research funds, Bill Clinton is Brown's comrade in arms—on paper. The Clinton-Gore policy statement of February 22, *Technology for America's Economic Growth: A New Direction to Build Economic Strength*, takes a holy stance, declaring an intent to "work closely with Congress to prevent 'earmarking' of funds for science and technology. Peer review and merit-based competition are critical to the success of any science and technology project."

Maybe so. But pork is dear to Congress, and Clinton needs all the friends he can muster on Capitol Hill. George Brown, crusader against earmarked appropriations, is in a tiny minority.—DSG

Dual-Use Awards Announced

The Clinton Administration is dishing out large helpings of money in pursuit of its plan—titled the Technology Reinvestment Project (TRP)— to redeploy $472 million this year in Pentagon funds to "dual use" research intended to serve military and civilian markets.

In a statement issued by the White House press office on November 24, Clinton announced the award of $110 million in federal matching funds for 55 projects, with this batch focused on "deploying advanced technologies through 'grassroots' organizations and alliances, such as state-based manufacturing extension programs." On October 22, 41 awards, totaling $140 million in federal matching funds, were announced. More are due this month.

Announced in March, TRP says it has drawn 2850 proposals, seeking $8.5 billion, from teams of academic, industrial, and government researchers.

. . . Clinton Plans a Presidential Science Committee

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be a member of the new Council. Serving on the Council, too, will be Vice President Gore. Though Gore has not assumed the role of technology "czar" envisioned during the election campaign, he puts in a lot of time in that subject area, working closely with Gibbons, an old colleague from their days on Capitol Hill.

Clinton also announced plans for his own assemblage of S&T Presidential councilors drawn from outside of government, up to 15 of them, as yet unnamed, to serve as the President's Committee of Advisors on Science and Technology—PCAST.

As another boost in rank-conscious Washington, the NSTC was accorded cabinet-level status, a distinction employed so promiscuously that the Cabinet Room at the White House could not possibly accommodate all the eligible dignitaries. Nonetheless, with a membership that includes the Vice President, the Secretaries of Defense, State, Energy, Commerce, and Interior, and the Director of the Office of Management and Budget, the NSTC represents a new high in political heft for science and technology.

Also listed as members are the heads of NASA, EPA, and NSF, and the Secretary of Health and Human Services—major figures in federal R&D matters, but of lesser importance in the political arena. The White House announcement did not mention the Secretary of Agriculture or the Director of the National Institutes of Health as members of the new Council, but nothing precludes invitations for them as well as others to attend the party.

The immediate ancestor of NSTC is the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET), a long-dormant body that was revived during the Bush Administration to serve as a sort of sub-cabinet of government R&D. It met, chatted, and compared notes about who was doing what, and then exalted the outcome as "cross-cutting" reviews of federal programs. However, the Bush-era Council exercised no power over money or priorities. Clinton's new Council absorbs the roles and responsibilities of FCCSET, as well as those of the National Space Council, and the National Critical Materials Council. Clinton says the difference is that his Council will possess real power.

Whether the Clinton formulation will, in fact, make much of a difference is a separate matter. Super councils of one sort or another often arise in Washington, do little or nothing, and harmlessly wither away. But the NSTC, created by an Executive Order signed on November 23, is packed with the potential for a great deal of influence over finance, management, and priorities in all fields of science and technology.

Science has so far rated little attention in the Clinton White House. But when it comes to technology, Clinton—the self-proclaimed job creator—is forging ahead with ambitious and expensive programs to use government money and research resources for the benefit of civilian industry.

In a statement accompanying the Executive Order establishing NSTC, Clinton stressed the economic and social payoffs he's seeking from science and technology. "We must use this new Council," he said, "to harness science and technology to improve our quality of life and the Nation's long-term economic strength."

The Presidential statement also suggested that Clinton is aiming for a new conceptual approach in federal science and technology policy, but whether that amounts to anything substantial in actual practice is far from clear. "One of the most critical tasks I expect the NSTC to undertake," Clinton stated, "is an across-the-board review of federal spending on research and development. The Council will prepare coordinated R&D budget recommendations for accomplishing national objectives in areas ranging from information technologies to health research, from improving transportation to strengthening fundamental research and international science and technology programs.

"These recommendations," Clinton continued, "will focus on broad national goals rather than agency missions. The Council will work with the Office of Management and Budget to coordinate the efforts of all federal agencies in working to achieve these goals, and will oversee important science and technology initiatives such as the Clean Car initiative I announced in September."

A separate statement from the White House referred to the preparation of "coordinated R&D strategies and budget recommendations for accomplishing national goals," and listed the following "coordinating committees" for this task:

Health, Safety and Food R&D
Fundamental Science and Engineering Research
Information and Communication R&D
Environment and Natural Resources Research
Civilian Industrial Technology R&D
Education and Training R&D
Transportation R&D
National Security R&D
International Science, Engineering, and Technology R&D.

Members of the committees were not named in the announcement.

Advisor Gibbons told SGR that the FY 1995 budget, to be presented to Congress early next year, will reflect the new goals-over-agency approach in several of its segments, but that full implementation will not arrive until the following fiscal year.

The White House said the President's Committee of Advisors on Science and Technology "will include up to 15 distinguished individuals from non-federal sectors, drawn from industry, education and research institutions, non-governmental organizations, and other sources, including state and local government." It added that the Committee will be co-chaired by Presidential Science Advisor Gibbons and a "private-sector member selected by the President." In addition to advising the President, the statement said, the

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Firing Back at Critic of Federal Agricultural Research

The US Department of Agriculture "does not understand basic research in terms of sustained support," wrote Professor Robert L. Haselkorn, Department of Molecular Genetics and Cell Biology, University of Chicago, in a memo elicited by a Congressional questionnaire about "earmarked" research support [SGR October 1]. That and other criticisms by Haselkorn brought a reply from Paul K. Stumpf, Professor Emeritus of Biochemistry, UC Davis, published here, with Stumpf's permission, as part of SGR's effort to open up the politics of agricultural research, one of the least-discussed areas of federal R&D.

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While there is considerable debate over the use of the over-$1 billion in the USDA budget for a variety of research of an intramural and extramural type, the moneys you referred to, namely $70 million for competitive research with only $10 million for basic plant research, is grossly incorrect. For FY 92, the total moneys available was $92 million, of which at least $45 million was allocated to basic plant research. In your field, $3 million was "earmarked" for nitrogen fixation and metabolism.

In all cases, the carefully selected panels, employing two panel members and at least 2-3 external reviewers, peer reviewed all grants in a fair and equitable manner. Indeed, I have been told by a number of panelists, who have served on NIH and NSF panels, that the review process at the NRI [National Research Initiative Competitive Grants Program] is comparable if not superior to those other panels.

If you examine the money problem carefully, you will discover that the real fault over the low level of funding for basic research in agriculture relates to (1) the Congress, which mandates programs and authorizes funding, and (2) the scientists and their societies who expect that by some obscure reasoning, moneys will be made available to them at adequate levels.

When I was Chief Scientist of the NRI [1989], I would ask audiences ... how many visited and/or wrote to their Congressional representative, and only two percent of the audience responded affirmatively. I realize it is easy to criticize the USDA for their funding practices, but the real fault lies with the scientists and their societies, who are very ineffective in their contacts with Congress. For the first time this year, FASEB [Federation of American Societies for Experimental Biology] in its Consensus Conference for Federal Funding for FY 95 included the USDA in its discussions. I know because I was there.

All I am trying to say is that your comments may have an element of truth but the total picture is far more complicated, and simplistic solutions, such as [proposed by Haselkorn in his memo] "a budget comparable to one of the NIH, say a billion dollars, run by people with a background in the NSF or the NIH, not USDA," is not only wishful thinking but also insulting to the staff of the NRI, who are exceptionally devoted, talented and loyal to the needs of modern research in agriculture.

Science Council

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Committee will "assist the National Science and Technology Council in securing private-sector involvement in its activities."

Discussions about the Council and the Presidential advisory committee took place off and on from almost the beginning of the Clinton administration, with Gore and Gibbons the central figures in seeking suggestions and arriving at the final formulation.

The big question is whether the reshuffle will make a difference in how and where Washington spends its R&D money. Reorganizations accompanied by hopeful statements have occurred before in this area, without noticeable effect.—DSG

Job Changes & Appointments

Frank H. Talbot plans to step down in April as Director of the Smithsonian National Museum of Natural History, a post he has held since 1989. Citing an asthmatic condition, Talbot says he'll return to Australia, where he previously held several senior academic and museum appointments. Also on the way out is ***Robert McC. Adams***, Secretary of the Smithsonian since 1984, who recently announced that he'll depart when a successor is appointed.

Gene Cohen is retiring as Deputy Director of the National Institute on Aging (NIA) at the National Institutes of Health. Starting January 1, he will be Director of a new non-profit organization, the Washington, DC, Center on Aging. Cohen joined the NIA in 1988 and served as its Acting Director from August 1991 to June 1993.

Christine K. Carrico, Director of the Pharmacological Sciences Program at the NIH National Institute of General Medical Sciences, has been appointed Director of Scientific Affairs for the American Association of Pharmaceutical Scientists, headquartered in Alexandria, Va.

Not planning to run for reelection next year, two subcommittee chairs on the House Science, Space, and Technology Committee: ***Marilyn Lloyd (D-Tenn.)***, a 10th-termer who heads the Energy Subcommittee, and ***Rep. Tim Valentine (D-NC)***, a sixth-termer, Chairman of the Technology, Environment, and Aviation Subcommittee.

Shrinks Vote to Reveal APA Pay Data

The Assembly of the American Psychiatric Association took a middle course last month in response to a proposal by members to publish salaries of APA senior staff in the APA newspaper [SGR, Nov. 1]. By unanimous vote, the Assembly opted for making the information available to members upon request. The APA Board must act on the recommendation. The *glasnost* proposal was prompted by inclusion of APA in SGR's annual report [March 15] on non-profit pay.

Cuts Are Strangling NASA, Goldin Tells Congress

From testimony at a hearing titled "Will Restructuring NASA Improve Its Performance?" held November 16 before the Subcommittee on Science, Technology, and Space of the Senate Committee on Commerce, Science, and Transportation.

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Daniel S. Goldin, NASA Administrator. When I came before the Senate in March 1992, the President's five-year budget request for NASA was $96 billion.... Last April, the President's request was for $80 billion over five years. With the latest cuts we are making in support of the reinventing government initiative, the five-year plan is now $78 billion. And we are seeking additional savings in preparing next year's budget. All of those levels have come forth in just the last 18 months.

At the same time that I was going through the confirmation process 18 months ago, the Congressional Budget Office [CBO] appeared to be representing budgetary realism when its profile assumed growth only to the extent of covering inflation. The CBO's figures were based on the $14.3 billion Congress appropriated for NASA in Fiscal Year 1992. Year by year, it would have given us a budget of $14.8 billion in 1993, $15.3 billion in 1994, and $16 billion in 1995.

Instead, in 1993, our appropriations were $14.3 billion; in 1994, $14.55 billion. And then last Friday, I received a letter cosigned by Senator Mikulski and Congressman Stokes, the heads of our appropriations subcommittees, indicating that NASA should base its planning on a budget of no more than $14 billion in 1995....

I know they are aware that this is fully $2 billion less than the CBO baseline in 1992, and $1.7 billion lower than the number assumed for 1995 in the President's budget request this year. So, under those numbers, if left unchecked, we will have gone from a five-year plan of $96 billion to $71 billion.... Our people have stood up and saluted and are making the painful cuts. But there is no more low-hanging fruit. Our concerns transcend the cuts themselves. It's the continuing instability in the budget outlook, caused to a large extent by Congressional threats to terminate or otherwise significantly alter important programs, that is also of concern.... The aerospace industry has been badly hurt by the defense reductions following the end of the Cold War. There is uncertainty out there. And I am worried that without stability, we can't expect to promote confidence, continuity, and a sense of vision in the workforce. We must stand by our people. We must stand by the merits of this program. We can't expect the same performance if we keep making cuts. It's that simple.

Norman R. Augustine, CEO, Martin Marietta, Chairman, in the Bush Administration, of the Advisory Committee on the Future of the US Space Program. You will recall that our Committee, based on discussions with virtually every decision-maker then responsible for the nation's civil space program, posited a budget which would increase by some 10 percent per year as being both plausible and supportable. In actuality, the budget has *declined* in real terms for the last few years, and the outlook for the future appears equally austere....

We raised the concern [in 1990] that sooner or later another Shuttle will be lost—and that the nation should get on with building a modern unmanned but man-rateable launch vehicle. This latter recommendation appears to be the only one wherein our findings may require revision in the face of today's markedly changed fiscal environment. In this regard, we reiterate our belief that NASA's plate is overloaded and we must not be guilty of exacerbating that situation. We note that the Air Force has encountered truly precipitous reductions in *its* budget—including that available to support the shared development of a new launch vehicle. We observe that it has been impossible, during the intervening years since our study, to create consensus to support the funding of any new launch vehicle....

Given the above circumstances, it would seem that in the environment of 1994 as compared with that of 1990 the most sensible course for our space-launch capability would involve three basic actions:

First, use the Space Shuttle on a very selective basis; namely, for those missions requiring a human presence in space. Second, support those key technologies and system studies which could at some time lead to a quantum jump, a cost-justifiable jump, to a newly developed launch capability. And third, allocate a limited amount of funding to improve the reliability of the existing fleet of expendable launch vehicles....

International projects offer many significant advantages, among which are the sharing of costs, the sharing of technology including hardware, building common political interests, and, candidly, some would add, making it difficult to back out of a project once begun. On the other side, international programs are *far* more complex to manage, governments and their priorities change, there is a technology leakage that can impact the commercial sphere, and anticipated net cost savings are seldom realized.

Nonetheless, we believe that on balance, international cooperation in space is clearly warranted. We would merely offer to NASA the cautions that such cooperation is most easily implemented on small, short-term projects such as science projects; that managing "contractors" abroad will not bear any resemblance to the sort of management to which NASA is accustomed, and that particular care need be exercised when dealing with non-market economies that America's own space industrial base, already badly weakened by cutbacks in defense, not be reduced to an ineffectual condition. Finally ... space programs have tended to evoke a somewhat nationalistic pride on the part of the public. Any activity that might be viewed, correctly or incorrectly, as merely a "subcontracted" space program to a foreign nation may not be able to sustain broad public support.

More IN PRINT: Soil and Water, World Health Data

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Soil and Water Quality: Agenda for Agriculture (516 pp., $54.95, plus $4 for shipping), from the National Academy of Sciences (NAS) Committee on Long-Range Soil and Water Conservation Policy, says protection of soil and water quality merit more attention from federal and state agencies, and warns, "In some regions, soil degradation and water pollution may already be serious enough that solutions will entail economic losses to the agricultural sector." The report says that market-based incentives should be added to the traditional voluntary methods for improving soil and water quality, but suggests that stronger methods might be in order where farm owners and managers are "unacceptably slow" in cleaning up their performance. Sandra S. Batie, Professor of Food and Agricultural Policy, Michigan State University, chaired the study, supported by the US Department of Agriculture and the Environmental Protection Agency. Craig A. Fox of the Academy staff served as Project Director.

Also from the Academy: ***Private Lives and Public Policies: Confidentiality and Accessibility of Government Statistics*** (274 pp., $34.95, plus $4 for shipping), from the Panel on Confidentiality and Data Access, notes that safeguards for confidentiality vary widely among the 70-plus federal agencies that collect statistical data from the public, and warns that suspicions of misuse can erode the public's cooperation with the data collectors. Among the recommendations: legislation to restrict disclosure of personal data, while providing for distribution for statistical purposes, and inclusion of advocacy groups concerned about privacy on survey advisory committees. The report was sponsored by over a dozen federal agencies, including the National Science Foundation, Bureau of the Census, the Internal Revenue Service, and the National Institute on Aging. George T. Duncan, Professor of Statistics, Carnegie Mellon University, chaired the Panel. Michele Conrad served as Senior Project Assistant.

Order from: National Academy Press, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 1-800/624-6242; in Washington, DC, area: 202/334-3313.

Advanced Materials and Processing: The Fiscal Year 1994 Federal Program (48 pp., no charge), from the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET), a brief, non-technical review of policies, programs, and budgets for materials research in federal agencies, which all together are spending about $2 billion in this area in the current fiscal year.

The report, a supplement to the President's budget request, was prepared by a FCCSET working group chaired by Lyle H. Schwartz, Director of the Materials Science and Engineering Laboratory at the National Institute of Standards and Technology.

Order from: Committee on Industry and Technology/COMAT, c/o NIST, Room B309, Materials Building, Gaithersburg, Md. 20899; attn. Mrs. Roth; tel. 301/975-5655; fax 301/926-8349.

Contributions of DOE Weapons Labs and NIST to Semiconductor Technology (GPO Stock No. 052-003-01349-5; 85 pp., $5.50), from the Congressional Office of Technology Assessment (OTA), says resources relevant to the semiconductor industry are plentiful at the National Institute of Standards and Technology and the Department of Energy's labs. But, OTA adds, there's no clear strategy for linking the labs to industry or for avoiding overlaps in their programs. The report was requested by Sen. Ernest Hollings (D-SC), Chairman of the Commerce, Science, and Transportation Committee. Julie Fox Gorte served as OTA Project Director.

Also from OTA: ***Energy Efficiency: Challenges and Opportunities for Electric Utilities*** (GPO Stock No.052-003-01348-7; 193 pp., $12), an upbeat report, tempered with a few cautions, about progress and potential in electric-energy conservation, with OTA noting estimates of reduced consumption of 20 to 45 percent of current use by 2000 from the "most promising technical opportunities." The report, the latest from OTA's ongoing study of "US Energy Efficiency: Past Trends and Future Opportunities," was requested by several Congressional Committees. James F. Gibbons, Stanford University, chaired the panel for the report, and Karen Larsen of OTA was Project Director.

International Health Studies: What the Numbers Mean for the United States (GPO Stock No. 052-003-01354-1; 163 pp., $11), a timely study, comparing US vital statistics with those of other industrialized nations. Rosemary Stevens, University of Pennsylvania, chaired the OTA Advisory Panel; Maria Hewett served as Study Director.

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IN PRINT: Clinton Tech Plan, NSF Publications List

The publications listed are obtainable as indicated—not from SGR.

Technology for Economic Growth: President's Progress Report (68 pp., $15.50), a self-congratulatory communique from the Clinton Administration, puffing up the numerous tech-related measures the White House has initiated, proposed, or pondered for economic rejuvenation: shifting funds from military to civilian R&D programs, new links between federal labs and industry, lighter export controls, etc. Compared with the minor stirrings in this area during the semi-comatose Bush Administration, the Clinton tech program rises to hyper-activity.

But at this relatively early stage, there's little or no evidence of economic payoff from all the thrashing about. Apparently stung by allegations of indifference to basic research, the President's report speaks kindly of science, particularly at the National Science Foundation, but understandably omits mention of Clinton's proposals to reduce research spending at the National Institutes of Health and the Department of Agriculture. The report is described as a follow-up to a still-available production published last February, *Technology for America's Economic Growth: A New Direction to Build Economic Strength* (47 pp., $17.50).

Order from: National Technical Information Service, 5285 Port Royal Rd., Springfield, Va. 22161; tel. 703/487-4650; fax 703/321-8547.

Publications List: FY 1989-93 (21 pp., no charge), from the Division of Science Resources Studies (SRS) at the National Science Foundation, listing R&D policy studies, budget reports, manpower and facilities surveys, etc., all available without charge, on paper and most of them electronically, too. SRS reports contain much of the basic data used in deliberations in Congress, the White House, and elsewhere on science and technology issues.

Order from: National Science Foundation, Science Resources Studies, Room 965, 4201 Wilson Blvd., Arlington, Va. 22230; tel. 703/306-1780; fax 703/644-4278; BITNET pubs@nsf; Internet pubs@nsf.gov.

Opportunities for the Use of Information Resources and Advanced Technologies in Congress (74 pp., no charge), a flock of recommendations—from broader use of E-Mail to terminals on members' desks in each chamber—prepared for the Joint Committee on the Organization of Congress by the Carnegie Commission on Science, Technology, and Government. The report is the work of two veteran alumni of Capitol Hill, Robert Lee Chartrand, formerly of the Congressional Research Service, and Robert C. Ketcham, former Chief of Staff of the House Committee on Science, Space, and Technology. Starting with a proposal to create a Congressional Joint Committee on Information Technology and Resources, to replace the Joint Committee on the Library and the Joint Committee on Printing, the report calls for establishing a barrier-free information environment for Congress, including electronic "kiosks" scattered around Capitol Hill for instant access to what's going on.

The prescriptions harmonize with the inevitable, since Congress, like other large organizations, cannot resist the electronic tide. What's ignored, however, is that Congress doesn't lack information—in fact, it's submerged in it. The missing link in the legislative branch is time to think and discuss. E-mail and CD-ROMs are useful. But with members nominally responsible for more duties than the working day can accommodate, electronic helpmates would probably intensify the overload symptoms so evident on Capitol Hill.

Though the Carnegie Commission has expired, soon to come is its third and final report on Congress, this one dealing with legislative handling of scientific and technological issues.

Order from: Carnegie Commission on Science, Technology, and Government, 437 Madison Ave., New York, NY 10022; tel. 212/207-6335; fax 212/838-6019.

After the Cold War: The US Aerospace Industry in the International Marketplace (35 pp., $17), a generally gloomy report from the Aerospace Industries Association of America (AIAA), Washington-based lobby for scores of defense contractors and civil aviation firms. Citing the continuing decline in defense outlays, a slumping domestic airline industry, and a static NASA budget, the report says the bright hopes of foreign sales are dimmed by intense and growing international competition in aerospace products.

The favored solution here, the report notes, is international joint ventures. But it adds that these are often impeded by US restrictions on technology transfer and "the fact that the US government is widely viewed as an unreliable partner." The report was prepared by Virginia C. Lopez, Executive Director of the AIAA Aerospace Research Center, and David H. Vadas.

Order from: Aerospace Industries Association of America, 1250 Eye St. NW, Washington, DC 20005; tel. 202/371-8561; fax 202/371-8470.

Psychological Science Agenda (24 pp., bimonthly, no charge), newsletter of the American Psychological Association (APA), containing reports of government activities, agency budgets, legislative developments, etc., concerning psychology, plus the requisite tub thumping about the diligence the APA staff invests in representing the membership before the US government—e.g., "Dr. Lenfant [Director of the NIH National Heart, Lung, and Blood Institute] responded to APA's desire to make the meeting more than ceremonial.... Favorably impressed with all that APA does on behalf of science, Dr. Lenfant invited closer relations between NHLBI and APA—an offer we accepted and on which we have already begun to act."

Order from: American Psychological Association, Science Directorate, 750 First St. NE, Washington, DC 20002-4242; tel. 202/336-6000; fax 202/336-5953.

(Continued on Page 7)